

## **ABSTRACT**

A mixer circuit in accordance with the invention includes a first mixer stage comprising a first and second transmission gates, and a second mixer stage comprising third and fourth transmission gates. The mixer further includes a first base band signal terminal coupled with the first and second transmission gates and a second base band signal terminal coupled with the third and fourth transmission gates. The mixer circuit processes signals so as to mix a base band signal communicated to the first and second base band signal terminals with a differential LO signal communicated to first and second LO signal terminals to create a first mixed differential signal. Alternatively, the mixer extracts a base band signal from a mixed signal communicated to the first and second mixed signal terminals signal using the LO signal communicated to the first and second LO signal terminals.